Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A method for designing a plurality of electrical paths in a substrate used for coupling to a die, the substrate having a plurality of layers, the method comprising:

receiving a report identifying end connection points for the plurality of electrical paths;

dividing the plurality of electrical paths into sections including a first end section, an intermediate section, and a second end section;

selecting modular cells for the first end section and the second end section, the modular cells being a first end modular cell having a plurality of first end electrical paths defined by a first common constraint and a second end modular cell having a plurality of second end electrical paths defined by a second common constraint; ~~and~~

selecting the first common constraint based on one of the plurality of first end electrical paths having the greatest limitation on the first common constraint; and

connecting the first end modular cell to the second end modular cell with transmission lines to form the plurality of electrical paths, the transmission lines corresponding to the intermediate section.

2. (Original): The method of claim 1, wherein the report identifies which end connection points are interconnected.

3. (Original): The method of claim 2, wherein the report also identifies a set of coordinates that corresponds to a set of I/O pad locations on the die.

4. (Original): The method of claim 2, wherein the report is a netlist.

5. (Original): The method of claim 2, wherein the first and second end sections include a portion of at least one electrical path that traverses the plurality of layers.

6. (Original): The method of claim 2, wherein the intermediate section includes a portion of at least one electrical path that traverses only one of the plurality of layers.

7. (Original): The method of claim 3, wherein the plurality of electrical paths is selected from the group consisting of signal, power, and ground electrical paths.

8. (Previously Amended): The method of claim 1, wherein connecting comprises:

automatically aligning the first end modular cell, transmission lines, and second end modular cell such that the first end, intermediate, and second end electrical paths form the electrical paths with corresponding end connection points that are consistent with the report.

9. (Currently Amended): A method for designing a plurality of electrical paths in a substrate used for coupling to a die, the substrate having a plurality of layers, the method comprising:

receiving a report identifying end connection points for the plurality of electrical paths and identifying a set of coordinates that correspond to a set of I/O pad locations on the die, the set of coordinates being relative to the die, the plurality of electrical paths including signal, power, and ground electrical paths;

dividing the plurality of electrical paths into three sections including a first end section, an intermediate section, and a second end section;

selecting a first end modular cell and a second end modular cell associated with the first and second end sections, wherein the first end modular cell comprises a plurality of first end electrical paths defined by a common constraint, wherein each first end electrical path includes one of the end connection points that corresponds to the set of coordinates; ~~and~~

selecting the common constraint based on one of the plurality of first end electrical paths having the greatest limitation on the common constraint; and

connecting the first end and second end modular cells with transmission lines to form the plurality of electrical paths, the transmission lines corresponding with the intermediate section.

10. (Original): The method of claim 9, wherein the common constraint is predefined.

11. (Cancelled)

12. (Original): The method of claim 9, wherein the common constraint comprises an electrical parameter.

13. (Original): The method of claim 12, wherein the electrical parameter is selected from the group consisting of polarity, propagation delay, impedance, and RLC.

14. (Original): The method of claim 9, wherein the common constraint comprises a geometrical parameter.

15. (Original): The method of claim 14, wherein the geometrical parameter is selected from the group consisting of electrical path spacing and electrical path thickness.

16. (Original): The method of claim 9, wherein the common constraint comprises a set ratio of signal, power, or ground electrical paths amongst the plurality of first end electrical paths.

17. (Previously Amended): The method of claim 9, wherein the second end modular cell comprises a plurality of second end electrical paths defined by a second common constraint, wherein each second end electrical path includes one of the end connection points that has a BGA coordinate relative to the set of coordinates.

18. (Original): The method of claim 17, wherein the second common constraint is predefined.

19. (Previously Amended): A method for designing a plurality of electrical paths in a substrate used for coupling to a die, the substrate having a plurality of layers, the method comprising:

receiving a report identifying end connection points for the plurality of electrical paths and identifying a set of coordinates that correspond to a set of I/O pad locations on the die, the set of coordinates being relative to the die, the plurality of electrical paths including signal, power, and ground electrical paths;

dividing the plurality of electrical paths into three sections including a first end section, an intermediate section, and a second end section;

selecting a first end cell and a second end cell associated with the first and second end sections,

wherein the first end cell comprises a plurality of first end electrical paths defined by a common constraint, each first end electrical path includes one of the end connection points that corresponds to the set of coordinates,

wherein the second end cell comprises a plurality of second end electrical paths defined by a second common constraint, each second end electrical path includes one of

the end connection points that has a BGA coordinate relative to the set of coordinates, wherein the second common constraint is selected based on one of the plurality of second end electrical paths having the greatest limitation on the second common constraint; and

connecting the first end and second end cells with transmission lines to form the plurality of electrical paths, the transmission lines corresponding with the intermediate section.

20. (Original): The method of claim 17, wherein the second common constraint comprises an electrical parameter.

21. (Original): The method of claim 20, wherein the electrical parameter is selected from the group consisting of polarity, propagation delay, impedance, and RLC.

22. (Original): The method of claim 17, wherein the second common constraint comprises a geometrical parameter.

23. (Original): The method of claim 22, wherein the geometrical parameter is selected from the group consisting of electrical path spacing and electrical path thickness.

24. (Original): The method of claim 17, wherein the second common constraint comprises a set ratio of signal, power, or ground electrical paths amongst the plurality of second end electrical paths.

25. (Original): The method of claim 17, wherein the transmission lines comprise a plurality of intermediate electrical paths defined by a third common constraint, wherein each intermediate electrical path is further defined by corresponding first end and second end electrical paths.

26. (Original): The method of claim 25, wherein the third common constraint is predefined.

27. (Original): The method of claim 25, wherein the third common constraint comprises a geometrical parameter.

28. (Original): The method of claim 27, wherein the geometrical parameter is selected from the group consisting of electrical path spacing and electrical path thickness.

29-38. (Canceled)

39. (New) The method of claim 1 further comprising:

selecting the second common constraint based on one of the plurality of second end electrical paths having the greatest limitation on the second common constraint.